

## Interview Summary

Application No.

09/325,603

Applicant(s)

SVENDSEN ET AL.

Examiner

Elizabeth Slobodyansky

Art Unit

1652

All participants (applicant, applicant's representative, PTO personnel):

(1) Elizabeth Slobodyansky.

(3) Allan Svendsen (inventor).

(2) Jason Garbell (attorney).

(4) Peter Lindum (attorney).

Date of Interview: 07 May 2003.

Type: a) ☐ Telephonic b) ☐ Video Conference  
c) ☒ Personal [copy given to: 1) ☐ applicant 2) ☒ applicant's representative]

Exhibit shown or demonstration conducted: d) ☒ Yes e) ☐ No.

If Yes, brief description: Generating a model of SEQ ID NO:2 using the three-dimensional structure of SEQ ID NO:6 and a computer was shown.

Claim(s) discussed: claim 93 and proposed claim 94 (attached).

Identification of prior art discussed: none.

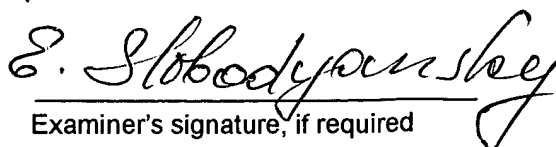
Agreement with respect to the claims f) ☐ was reached. g) ☒ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: \_\_\_\_\_.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

**ELIZABETH SLOBODYANSKY, PH.D**  
**PRIMARY EXAMINER**

  
Examiner's signature, if required

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

## Summary of Record of Interview Requirements

### Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

### Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

#### Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

#### 37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,  
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

### Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

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Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: the 112, 1st , issues were discussed. Applicants argue that the possession of the structure in Appendix I provides enablement and description of a three-dimensional structure of any amylase that is 70% homologous to SEQ ID NO: 2, SEQ ID NO:4, etc. Examiner argued that there is no description of the correlation between the structure of these parent structures and specific properties that have to be changed. Thus, making a variant based on said structures is not enabled. Examiner will consider additional arguments and documents that will be provided by Applicants with the amendment to make determination of whether the rejections should be made or withdrawn .

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Attorney Docket No.: 4394.214-US

PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: Svendsen et al.

Confirmation No: 3011

Serial No.: 09/325,603

Group Art Unit: 1652

Filed: June 3, 1999

Examiner: E. Slobodyansky

For:  $\alpha$ -Amylase Variants

**PROPOSED CLAIMS FOR DISCUSSION**

Commissioner for Patents  
Washington, DC 20231

Sir:

Before examination, please amend the above-identified application as follows:

94. A method for producing a variant of a parent alpha-amylase having an altered property relative to said parent alpha-amylase, wherein said altered property is selected from the group consisting of substrate specificity, substrate binding, substrate cleavage pattern, temperature stability, pH dependence of enzymatic activity, pH dependence of stability, stability towards oxidation, Ca<sup>2+</sup>-dependency and specific activity, wherein said parent alpha-amylase has an amino acid sequence having at least 70% homology to the amino acid sequence of SEQ ID NO: 2, SEQ ID NO: 4 or SEQ ID NO:6, when homology is determined by the GAP program (Genetic Computer Group, Version 7.3) using default values for GAP penalties, said method comprising:
- (a) generating a model of the three-dimensional structure of said parent alpha-amylase using a computer programmed for generating said model and wherein said model displays the coordinates for the three dimensional structure, wherein said three-dimensional structure has an A domain, a B domain and a C domain, wherein said A domain has an amino acid sequence corresponding to residues 1-103 and 206-395 of SEQ ID NO:2 and having the three-dimensional structure of a beta/alpha 8 barrel with 8 central beta strands and 8 flanking alpha-helices; wherein said B domain has an amino acid sequence corresponding to residues 104-205 of SEQ ID NO:2 and having a three-dimensional structure of a 5-stranded anti-parallel beta-sheet structure containing at least one long loop structure and having connectivity -1, +3, -1X, and +2; wherein said C domain has an amino acid sequence corresponding to residues 396-483 of SEQ ID NO:2 and having a three dimensional structure of beta-strands which forms a

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single 8-stranded sheet structure; and wherein said three-dimensional structure has three calcium ion binding sites and one sodium ion binding site; wherein two of the three calcium ions form part of a linear cluster of three ions, wherein the central ion of the linear cluster is a sodium, and wherein the linear cluster is located between the A domain and the B domain, and wherein the third calcium binding site is between the A domain and the C domain;

(b) identifying in said three-dimensional structure of said parent alpha-amylase at least one amino acid residue or at least one structural part; wherein an alteration in said at least one amino acid residue or said at least one structural part is predicted to result in said altered property,

(c) modifying the sequence of a nucleic acid encoding said parent alpha-amylase to produce a nucleic acid encoding a deletion, insertion, or substitution of one or more amino acids at a position corresponding to said at least one amino acid residue or said at least one structural part identified in step (b); and

(d) expressing said modified nucleic acid of step (c) in a host cell to produce the variant alpha-amylase.

# FAX COVER SHEET

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To: Examiner Slobodyansky

OFFICIAL

From: Jason Garbell

Date: May 7, 2003

Message: 09/325,603

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